IN THE CLAIMS

Please add new claims 39-46 as follows below.

The following listing of claims will replace all prior versions, and listings, of claims in the application:

MARKED UP VERSION OF CLAIMS

1. (Original) A fiber optic module for coupling photons between optoelectronic devices and optical fibers, the fiber optic module comprising:

a base having a first, a second, a third and a fourth opening;

a first vertical printed circuit board (PCB) arranged parallel to a first optical axis of a first optoelectronic device, the first optoelectronic device having terminals coupled to the first vertical printed circuit board, the first vertical printed circuit board arranged perpendicular to the base, the first vertical printed circuit board having a plurality of pins extending through the first opening in the base to couple to a system;

a second vertical printed circuit board (PCB) arranged parallel to a second optical axis of a second optoelectronic device, the second optoelectronic device having terminals coupled to the second veritcal printed circuit board, the second vertical printed circuit board arranged perpendicular to the base, the second vertical printed circuit board having a plurality of pins extending through the second opening in the base to couple to the system;

a third vertical printed circuit board (PCB) arranged parallel to a third optical axis of a third optoelectronic device, the third optoelectronic device having terminals coupled to the third vertical printed circuit board, the third vertical printed circuit board arranged perpendicular to the base, the third vertical printed circuit board having a plurality of pins extending through the third opening in the base to couple to the system;

a fourth vertical printed circuit board (PCB) arranged parallel to a fourth optical axis of a fourth optoelectronic device, the fourth optoelectronic device having terminals coupled to the fourth vertical printed circuit board, the fourth vertical printed circuit board arranged perpendicular to the base, the fourth vertical printed circuit board having a plurality of pins extending through the fourth opening in the base to couple to the system; and

a shielded housing coupled to the base to encase the first vertical, second vertical, third vertical, and fourth vertical printed circuit boards to reduce electromagnetic interference (EMI).

2. (Original) The fiber optic module of claim 1 further comprising:

an optical block coupled to the first, second, third and fourth optoelectronic devices, the optical block having

a first, second, third and fourth openings to receive the first, second, third and fourth optoelectronic devices respectively, and

a first, second, third, and fourth lens to couple photons between the first, second, third and fourth optoelectronic

devices and first, second, third and fourth optical fibers respectively.

3. (Original) The fiber optic module of claim 2 further comprising:

a nose coupled to the base, the nose to receive an optical fiber connector and to hold the first, second, third and fourth optical fibers substantially fixed and aligned with the first, second, third, and fourth optical openings of the optical block.

4. (Original) The fiber optic module of claim 3 further comprising:

a nose shield surrounding the nose to reduce electromagnetic interference.

5. (Original) The fiber optic module of claim 1 wherein,

the third vertical printed circuit board and the third optoelectronic device and the fourth vertical printed circuit board and the fourth optoelectronic device to provide redundancy for the fiber optic module.

6. (Original) The fiber optic module of claim 1 wherein,

the first vertical printed circuit board and the first optoelectronic device; the second vertical printed circuit board and the second optoelectronic device; the third vertical printed circuit board and the third optoelectronic device; and the fourth vertical printed circuit board and the fourth

optoelectronic device to provide a four channel fiber optic module.

7. (Original) A fiber optic module for coupling photons between optoelectronic devices and optical fibers, the fiber optic module comprising:

a base;

at least a pair of vertical printed circuit boards arranged parallel to a first optical axis of a first optoelectronic device and parallel to a second optical axis of a second optoelectronic device respectively, the first optoelectronic device having terminals coupled to one of the vertical printed circuit boards and the second optoelectronic device having terminals coupled to another one of the vertical printed circuit boards, the at least pair of vertical printed circuit boards being arranged perpendicular to the base;

at least a third printed circuit board (PCB) arranged parallel to a third optical axis of a third optoelectronic device, the third optoelectronic device having terminals coupled to the third printed circuit board; and

at least a fourth printed circuit board (PCB) arranged parallel to a fourth optical axis of a fourth optoelectronic device, the fourth optoelectronic device having terminals coupled to the fourth printed circuit board.

8. (Original) The fiber optic module of claim 7 further comprising:

a housing coupled to the base.

9. (Original) The fiber optic module of claim 8 wherein, the housing is a shielded housing to encase the at least pair of vertical printed circuit boards and the at least third and the at least fourth printed circuit boards to reduce electromagnetic interference (EMI).

10. (Original) The fiber optic module of claim 7 further comprising:

an optical block coupled to the first, second, third and fourth optoelectronic devices, the optical block having

a first, second, third and fourth openings to receive the first, second, third and fourth optoelectronic devices respectively, and

a first, second, third, and fourth lens to couple photons between the first, second, third and fourth optoelectronic devices and first, second, third and fourth optical fibers respectively.

11. (Original) A fiber optic module for coupling photons between optoelectronic devices and optical fibers, the fiber optic module comprising:

a base having a first, a second, a third and a fourth opening;

a first horizontal printed circuit board (PCB) arranged parallel to a first optical axis of a first optoelectronic device, the first optoelectronic device having terminals coupled to the first horizontal printed circuit board, the first horizontal printed circuit board arranged parallel to

the base, the first horizontal printed circuit board having a plurality of pins extending through the first opening in the base to couple to a system;

a second horizontal printed circuit board (PCB) arranged parallel to a second optical axis of a second optoelectronic device, the second optoelectronic device having terminals coupled to the second horizontal printed circuit board, the second horizontal printed circuit board arranged parallel to the base, the second horizontal printed circuit board having a plurality of pins extending through the second opening in the base to couple to the system;

a third horizontal printed circuit board (PCB) arranged parallel to a third optical axis of a third optoelectronic device, the third optoelectronic device having terminals coupled to the third horizontal printed circuit board, the third horizontal printed circuit board arranged parallel to the base, the third horizontal printed circuit board having a plurality of pins extending through the third opening in the base to couple to the system;

a fourth horizontal printed circuit board (PCB) arranged parallel to a fourth optical axis of a fourth optoelectronic device, the fourth optoelectronic device having terminals coupled to the fourth horizontal printed circuit board, the fourth horizontal printed circuit board arranged parallel to the base, the fourth horizontal printed circuit board having a plurality of pins extending through the fourth opening in the base to couple to the system; and

a shielded housing coupled to the base to encase the first horizontal, second horizontal, third horizontal, and

fourth horizontal printed circuit boards to reduce electromagnetic interference (EMI).

12. (Original) The fiber optic module of claim 11 further comprising:

an optical block coupled to the first, second, third and fourth optoelectronic devices, the optical block having

a first, second, third and fourth openings to receive the first, second, third and fourth optoelectronic devices respectively, and

a first, second, third, and fourth lens to couple photons between the first, second, third and fourth optoelectronic devices and first, second, third and fourth optical fibers respectively.

13. (Original) The fiber optic module of claim 12 further comprising:

a nose coupled to the base, the nose to receive an optical fiber connector and to hold the first, second, third and fourth optical fibers substantially fixed and aligned with the first, second, third, and fourth optical openings of the optical block.

14. (Original) The fiber optic module of claim 13 further comprising:

a nose shield surrounding the nose to reduce electromagnetic interference.

15. (Original) The fiber optic module of claim 11

wherein,

the third horizontal printed circuit board and the third optoelectronic device and the fourth horizontal printed circuit board and the fourth optoelectronic device to provide redundancy for the fiber optic module.

16. (Original) The fiber optic module of claim 11 wherein,

the first horizontal printed circuit board and the first optoelectronic device; the second horizontal printed circuit board and the second optoelectronic device; the third horizontal printed circuit board and the third optoelectronic device; and the fourth horizontal printed circuit board and the fourth optoelectronic device to provide a four channel fiber optic module.

17. (Original) A fiber optic module for coupling photons between optoelectronic devices and optical fibers, the fiber optic module comprising:

a base having a first, a second, a third and a fourth opening;

a first vertical printed circuit board (PCB) arranged parallel to a first optical axis of a first optoelectronic device, the first optoelectronic device having terminals coupled to the first vertical printed circuit board, the first vertical printed circuit board arranged perpendicular to the base, the first vertical printed circuit board having a plurality of pins extending through the first opening in the base to couple to a system;

a second vertical printed circuit board (PCB) arranged parallel to a second optical axis of a second optoelectronic device, the second optoelectronic device having terminals coupled to the second vertical printed circuit board, the second vertical printed circuit board arranged perpendicular to the base, the second vertical printed circuit board having a plurality of pins extending through the second opening in the base to couple to the system;

a third horizontal printed circuit board (PCB) arranged parallel to a third optical axis of a third optoelectronic device, the third optoelectronic device having terminals coupled to the third horizontal printed circuit board, the third horizontal printed circuit board arranged parallel to the base, the third horizontal printed circuit board having a plurality of pins extending through the third opening in the base to couple to the system;

a fourth horizontal printed circuit board (PCB) arranged parallel to a fourth optical axis of a fourth optoelectronic device, the fourth optoelectronic device having terminals coupled to the fourth horizontal printed circuit board, the fourth horizontal printed circuit board arranged parallel to the base, the fourth horizontal printed circuit board having a plurality of pins extending through the fourth opening in the base to couple to the system; and

a shielded housing coupled to the base to encase the first vertical, second vertical, third horizontal, and fourth horizontal printed circuit boards to reduce electromagnetic interference (EMI).

18. (Original) The fiber optic module of claim 17 further

comprising:

an optical block coupled to the first, second, third and fourth optoelectronic devices, the optical block having

a first, second, third and fourth openings to receive the first, second, third and fourth optoelectronic devices respectively, and

a first, second, third, and fourth lens to couple photons between the first, second, third and fourth optoelectronic devices and first, second, third and fourth optical fibers respectively.

19. (Original) The fiber optic module of claim 18 further comprising:

a nose coupled to the base, the nose to receive an optical fiber connector and to hold the first, second, third and fourth optical fibers substantially fixed and aligned with the first, second, third, and fourth optical openings of the optical block.

20. (Original) The fiber optic module of claim 19 further comprising:

a nose shield surrounding the nose to reduce electromagnetic interference.

21. (Original) The fiber optic module of claim 17 wherein,

the second vertical printed circuit board and the second optoelectronic device and the fourth horizontal printed

circuit board and the fourth optoelectronic device to provide redundancy for the fiber optic module.

22. (Original) The fiber optic module of claim 17 wherein,

the first vertical printed circuit board and the first optoelectronic device; the second vertical printed circuit board and the second optoelectronic device; the third horizontal printed circuit board and the third optoelectronic device; and the fourth horizontal printed circuit board and the fourth optoelectronic device to provide a four channel fiber optic module.

23. (Original) A fiber optic module for coupling photons between optoelectronic devices and optical fibers, the fiber optic module comprising:

a base having a first, a second, and a third opening;

a first vertical printed circuit board (PCB) arranged parallel to a first optical axis of a first optoelectronic device, the first optoelectronic device having terminals coupled to the first vertical printed circuit board, the first vertical printed circuit board arranged perpendicular to the base, the first vertical printed circuit board having a plurality of pins extending through the first opening in the base to couple to a system;

a second vertical printed circuit board (PCB) arranged parallel to a second optical axis of a second optoelectronic device, the second optoelectronic device having terminals coupled to the second vertical printed circuit board, the second vertical printed circuit board arranged perpendicular

to the base, the second vertical printed circuit board having a plurality of pins extending through the second opening in the base to couple to the system;

a third horizontal printed circuit board (PCB) arranged parallel to a third optical axis of a third optoelectronic device and a fourth optical axis of a fourth optoelectronic device, the third and fourth optoelectronic devices each having terminals coupled to the third horizontal printed circuit board, the third horizontal printed circuit board arranged parallel to the base, the third horizontal printed circuit board having a plurality of pins extending through the third opening in the base to couple to the system; and

a shielded housing coupled to the base to encase the first vertical, second vertical, and third horizontal printed circuit boards to reduce electromagnetic interference (EMI).

24. (Original) The fiber optic module of claim 23 further comprising:

an optical block coupled to the first, second, third and fourth optoelectronic devices, the optical block having

a first, second, third and fourth openings to receive the first, second, third and fourth optoelectronic devices respectively, and

a first, second, third, and fourth lens to couple photons between the first, second, third and fourth optoelectronic devices and first, second, third and fourth optical fibers respectively.

25. (Original) The fiber optic module of claim 24 further comprising:

a nose coupled to the base, the nose to receive an optical fiber connector and to hold the first, second, third and fourth optical fibers substantially fixed and aligned with the first, second, third, and fourth optical openings of the optical block.

26. (Original) The fiber optic module of claim 25 further comprising:

a nose shield surrounding the nose to reduce electromagnetic interference.

27. (Original) The fiber optic module of claim 24 wherein,

the second vertical printed circuit board and the second optoelectronic device and the fourth optoelectronic device to provide redundancy for the fiber optic module.

28. (Original) The fiber optic module of claim 24 wherein,

the first vertical printed circuit board and the first optoelectronic device; the second vertical printed circuit board and the second optoelectronic device; and the third horizontal printed circuit board and the third optoelectronic device and the fourth optoelectronic device to provide a four channel fiber optic module.

29. (Original) A fiber optic module for coupling photons between optoelectronic devices and optical fibers, the fiber optic module comprising:

a base having a first, a second, a third and a fourth opening;

a first vertical printed circuit board (PCB) arranged parallel to a first optical axis of a first optoelectronic device, the first optoelectronic device having terminals coupled to the first vertical printed circuit board, the first vertical printed circuit board arranged perpendicular to the base, the first vertical printed circuit board having a plurality of pins extending through the first opening in the base to couple to a system;

a second vertical printed circuit board (PCB) arranged parallel to a second optical axis of a second optoelectronic device, the second optoelectronic device having terminals coupled to the second vertical printed circuit board, the second vertical printed circuit board arranged perpendicular to the base, the second vertical printed circuit board having a plurality of pins extending through the second opening in the base to couple to the system;

a third vertical printed circuit board (PCB) arranged parallel to a third optical axis of a third optoelectronic device, the third optoelectronic device having terminals coupled to the third vertical printed circuit board, the third vertical printed circuit board arranged perpendicular to the base, the third vertical printed circuit board having a plurality of pins extending through the third opening in the base to couple to the system;

a fourth horizontal printed circuit board (PCB) arranged parallel to a fourth optical axis of a fourth optoelectronic device, the fourth optoelectronic device having terminals coupled to the fourth horizontal printed circuit board, the

fourth horizontal printed circuit board arranged parallel to the base, the fourth horizontal printed circuit board having a plurality of pins extending through the fourth opening in the base to couple to the system; and

a shielded housing coupled to the base to encase the first vertical, second vertical, third vertical, and fourth horizontal printed circuit boards to reduce electromagnetic interference (EMI).

30. (Original) The fiber optic module of claim 29 further comprising:

an optical block coupled to the first, second, third and fourth optoelectronic devices, the optical block having

a first, second, third and fourth openings to receive the first, second, third and fourth optoelectronic devices respectively, and

a first, second, third, and fourth lens to couple photons between the first, second, third and fourth optoelectronic devices and first, second, third and fourth optical fibers respectively.

31. (Original) The fiber optic module of claim 30 further comprising:

a nose coupled to the base, the nose to receive an optical fiber connector and to hold the first, second, third and fourth optical fibers substantially fixed and aligned with the first, second, third, and fourth optical openings of the optical block.

32. (Original) The fiber optic module of claim 31 further comprising:

a nose shield surrounding the nose to reduce electromagnetic interference.

33. (Original) The fiber optic module of claim 29 wherein,

the second vertical printed circuit board and the second optoelectronic device and the fourth horizontal printed circuit board and the fourth optoelectronic device to provide redundancy for the fiber optic module.

34. (Original) The fiber optic module of claim 29 wherein,

the first vertical printed circuit board and the first optoelectronic device; the second vertical printed circuit board and the second optoelectronic device; the third vertical printed circuit board and the third optoelectronic device; and the fourth horizontal printed circuit board and the fourth optoelectronic device to provide a four channel fiber optic module.

35. (Original) A fiber optic module for coupling photons between optoelectronic devices and optical fibers, the fiber optic module comprising:

a base;

at least a pair of vertical printed circuit boards arranged parallel to a first optical axis of a first

optoelectronic device and parallel to a second optical axis of a second optoelectronic device respectively, the first optoelectronic device having terminals coupled to one of the vertical printed circuit boards and the second optoelectronic device having terminals coupled to another one of the vertical printed circuit boards, the at least pair of vertical printed circuit boards being arranged perpendicular to the base and having a first and second electrical connectors to plug into and out of an electrical connector of a host printed circuit board;

at least a third printed circuit board (PCB) arranged parallel to a third optical axis of a third optoelectronic device, the third optoelectronic device having terminals coupled to the at least third printed circuit board, the at least third printed circuit board having a third electrical connector to plug into and out of an electrical connector of the host printed circuit board; and

at least a fourth printed circuit board (PCB) arranged parallel to a fourth optical axis of a fourth optoelectronic device, the fourth optoelectronic device having terminals coupled to the fourth printed circuit board, the at least fourth printed circuit board having a fourth electrical connector to plug into and out of an electrical connector of the host printed circuit board.

36. (Original) The fiber optic module of claim 35 further comprising:

a housing coupled to the base.

37. (Original) The fiber optic module of claim 36

wherein,

the housing is a shielded housing to encase the at least pair of vertical printed circuit boards and the at least third and the at least fourth printed circuit boards to reduce electromagnetic interference (EMI).

38. (Original) The fiber optic module of claim 35 further comprising:

an optical block coupled to the first, second, third and fourth optoelectronic devices, the optical block having

a first, second, third and fourth openings to receive the first, second, third and fourth optoelectronic devices respectively, and

a first, second, third, and fourth lens to couple photons between the first, second, third and fourth optoelectronic devices and first, second, third and fourth optical fibers respectively.

AT

39. (New) A fiber optic module for coupling photons between optoelectronic devices and optical fibers, the fiber optic module comprising:

a base having a first opening and a second opening;

a first lower horizontal printed circuit board (PCB) arranged parallel to the base, the first lower horizontal printed circuit board having a first plurality of pins extending through the first opening in the base to couple to a system;

a second lower horizontal printed circuit board (PCB) arranged parallel to the base, the second lower horizontal printed circuit board having a second plurality of pins

extending through the second opening in the base to couple to the system;

a first upper horizontal printed circuit board (PCB) arranged parallel to a first optical axis of a first optoelectronic device, the first optoelectronic device having terminals coupled to the first upper horizontal printed circuit board, the first upper horizontal printed circuit board arranged parallel to the base and the first lower horizontal printed circuit board, the first upper horizontal printed circuit board having a third plurality of pins coupled to the first lower horizontal printed circuit board;

a second upper horizontal printed circuit board (PCB) arranged parallel to a second optical axis of a second optoelectronic device, the second optoelectronic device having terminals coupled to the second upper horizontal printed circuit board, the second upper horizontal printed circuit board arranged parallel to the base and the second lower horizontal printed circuit board, the second upper horizontal printed circuit board having a fourth plurality of pins coupled to the second lower horizontal printed circuit board; and

a shielded housing coupled to the base to encase the first lower horizontal, second lower horizontal, first upper horizontal, and second upper horizontal printed circuit boards to reduce electromagnetic interference (EMI).

40. (New) The fiber optic module of claim 39, further comprising:

an optical block coupled to the first and second optoelectronic devices, the optical block having

a first and second openings to receive the first and second optoelectronic devices respectively, and

a first and second lens to couple photons between the first and second optoelectronic devices and first and second optical fibers respectively.

41. (New) The fiber optic module of claim 40, further comprising:

a nose coupled to the base, the nose to receive an optical fiber connector and to hold the first, second, third and fourth optical fibers substantially fixed and aligned with the first, second, third, and fourth optical openings of the optical block.

42. (New) The fiber optic module of claim 41, further comprising:

a nose shield surrounding the nose to reduce electromagnetic interference.

43. (New) The fiber optic module of claim 39, wherein

the first lower horizontal printed circuit board and the first upper horizontal printed circuit board are transmit printed circuit boards

and the second lower horizontal printed circuit board and the second upper horizontal printed circuit board are receive printed circuit boards.

44. (New) The fiber optic module of claim 39, wherein

the first plurality of pins of the first lower horizontal printed circuit board are part of a first terminal pin header, and

the second plurality of pins of the second lower horizontal printed circuit board are part of a second terminal pin header.

45. (New) The fiber optic module of claim 44, wherein

the third plurality of pins of the first upper horizontal printed circuit board are part of a first interconnect pin header, and

the fourth plurality of pins of the second upper horizontal printed circuit board are part of a second interconnect pin header.

46. (New) The fiber optic module of claim 39, wherein

the third plurality of pins of the first upper horizontal printed circuit board are part of a first interconnect pin header, and

the fourth plurality of pins of the second upper horizontal printed circuit board are part of a second interconnect pin header.

REMARKS

This is in response to the Office Action mailed May 5, 2004. In the Office Action, claims 1-38 were cited as being subject to a restriction requirement. Reexamination and reconsideration of this case is respectfully requested in view of the amendments made herein and the following remarks.

New claims 39-46 have been added. No claim has been amended or cancelled. Accordingly, claims 1-46 are now at issue in the patent application. Of those at issue, claims 1, 7, 11, 17, 23, 29, 35, and 39 are independent claims. Applicant believes that no new matter has been added by this response.

I) RESTRICTION REQUIREMENT

In paragraph 1 of the Office Action, a genus-species restriction requirement was made of pending claims 1-38. Applicant respectfully traverses in part.

Under the restriction requirement, the Office Action formed the following six species:

Species I: represented by Figures 21A-21H

Species II: represented by Figures 8A and 8C

Species III: represented by Figure 21F

Species IV: represented by Figures 21B-21E and 21G-21H

Species V: represented by Figures 20A, 20D, and 20C

Species VI: represented by Figures 21A, 22A-22C, and 24A-24B.

The Office Action found claims 7-10 and 35-38 to be generic to species I, III, IV, and VI.

Applicant hereby provisionally elects Species 1 for examination.

The Office Action states that the six species are distinct and did not indicate how the species were formed. Note that there is an overlap in the figures that are used to represent Species I, III, IV, and VI.

Moreover, Applicant cannot find any of the pending claims 1-38 to explicitly read on Species V represented by Figures 20A, 20D, and 20C as these figures illustrate only three optoelectronic devices, while claims 1-38 recite four optoelectronic devices.

Additionally, Applicant respectfully submits that claims 29-34 are generic as to species I and III as they read thereon; and claims 17-22 are generic as to species I and IV as they read thereon.

Furthermore, none of the unamended pending claims 1-38 currently read on Species II represented by Figures 8A and 8C. Claims 11-16 may be amended to read thereon. Instead, Applicant has added new claims 39-46 to read on Species II represented by Figures 8A and 8C and hereby adds a new Figure 21I as is discussed further below. Claims 11-16, as originally filed, support and read on new Figure 21I as well as the optical block element of Figures 22A-22C.

As the Office Action was not clear in how the species were distinct from one another, Applicant can only guess as to how the current claims read on the species that have been formed. The following represents Applicant's best guess as to how the claims read on the species that have been formed:

Species 1 : Claims 1-6 (Fig. 21A); 7-10 (Figs. 21A-21H); 17-22 (figs. 21B-21E, 21H); 23-28 (figs 21C, 21G); 29-34 (fig. 21f); and 35-38 (figs. 21A-21H)

Species 2: New claims 39-46

Species 3: Claims 29-34 (fig. 21f)

Species 4: Claims 17-22 (figs. 21B, 21D, 21E, 21H), 23-28 (figs 21C, 21G)

Species 5: No claim herein as originally filed.

Species 6: Claims 1-6 (Figs. 21A, 22C); 7-10 (Figs. 21A, 22A-22C, 24A-24B); 12-14 ("optical block" of Figs. 22A-22C), 18-20 ("optical block" of Figs. 22A-22C), 24-28 ("optical block" of Figs. 22A-22C), 30-32 ("optical block" of Figs. 22A-22C), and 35-38 (Figs. 21A, 22A-22C)

As discussed previously Claims 11-16 read on new Figure 21I as well as elements of Figures 22A-22C, such as the optical block.

In view of the foregoing, Applicant respectfully requests reconsideration of the genus-species restriction requirement.

II) DRAWING AMENDMENT

Applicant has added a drawing of a newly added Figure 21I. Figure 21I illustrates "four horizontal printed circuit boards [to] form [an] alternate embodiment[] of four channel fiber optic modules that can provide four channels or dual redundancy."

[Applicant's specification as originally filed; Page 57, line 32 through page 58, line 2].

New Figure 21I was generated from the elements of claims 11-16 as they were originally filed, the originally filed specification, and drawings of other figures as they were originally filed. Thus, Applicant respectfully submits that no new matter has been added by adding this new Figure 21I.

Applicant respectfully requests the Examiner's approval of the addition of the newly added Figure 21I.

III) SPECIFICATION AMENDMENT

Applicant has amended the Cross Reference to Related Applications section, on page 1, line 13 to update the status of the related applications mentioned thereunder.

Applicant has amended a paragraph beginning at page 7, line 19, under the Brief Description of the Drawings section to include the newly added Figure 21I.

Applicant has amended four consecutive paragraphs beginning at page 46, line 27 to correct typographical errors in the reference numbers, grammatical errors, and replace an improper word "will" with --or--.

Applicant has amended paragraphs beginning at page 48, line 23 and page 56, line 16 to correct typographical errors in the reference numbers.

Applicant has inserted eleven new paragraphs at page 58, line 3 to describe the newly added Figure 21I.

The text of these new paragraphs was generated from claims 11-16 as they were originally filed and the originally filed specification. Thus, Applicant respectfully submits that no new matter has been added by this amendment to the specification.

CONCLUSION

A first examination as to the merits of the pending claims is respectfully requested. Allowance of the claims at an early date is solicited.

The Examiner is invited to contact Applicant's undersigned counsel by telephone at (714) 557-3800 to expedite the prosecution of this case should there be any unresolved matters remaining. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees in connection with the filing of this paper, including extension of time fees, to Deposit Account 02-2666 and please credit any excess fees to such deposit account.

Respectfully submitted
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

Dated: May 20, 2004

William E. Alford
Registration No. 37,764

12400 Wilshire Boulevard,
Seventh Floor
Los Angeles, California 90025
(714) 557-3800

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 *on:* May 20, 2004.

Susan McFarlane 5/20/04
Date